

## REMARKS

### **Amendment to the claims**

Claim 1 was amended to recite “melting a predetermined portion of the protecting circuit by the first laser device emitting laser light with short wavelength from a first angle, and then melting a predetermined portion of the glass substrate by the second laser device emitting laser light with long wavelength from a second angle without cutting the glass substrate”.

These amendments are supported by the application as filed, for example figure 3a and paragraph [0037] of the description.

New claims 5-20 find support in the application as filed, for example Figures 2a-2e and the corresponding parts of the description.

### **Rejection under 35 U.S.C. 103**

Claims 1-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Choo et al (US 6,297,869) or alternatively Choo et al (US 6,297,869) in view of the admitted prior art further taken with either one of Hafner or Boddicker.

The Applicants respectfully disagree.

### Claim 1

Claim 1 relates to a method for bonding an integrated circuit device to a glass substrate. In particular, claim 1 as amended provides a first laser device melting a predetermined portion of a protecting circuit with laser light of short wavelength from a first angle and a second laser

device melting a predetermined portion of a glass substrate with laser light of long wavelength from a second angle without cutting the glass substrate.

The Applicants note that Choo teaches that a cutter 200 comprising two laser light emitters 202 and 204 to heat a glass substrate and buffer layer. As described in column 10 line 48-56 of Choo, a refrigerant spreading unit 206 is employed to spray refrigerant after the heating of the cutter 200. The cutting lines of the glass substrate 152 and the buffer 158 are expanded and contracted by heat and refrigerant to generate high stress that causes the crack of the substrate.

The Applicants note in particular that Choo teaches that the glass substrate is cut by cutter 200 and the refrigerant spreading unit 206, but never teaches melting a glass substrate without thereby cutting the glass substrate. The method as recited by claim 1 as amended uses two laser devices to melt the glass substrate and the protecting circuit respectively from different directions, without cutting the glass substrate.

The Applicants respectfully submit that the Examiner has failed to show that Choo would disclose or suggest a method as disclosed in claim 1 as amended, and in particular comprising "melting a predetermined portion of the glass substrate by the second laser device emitting laser light with long wavelength from a second angle without cutting the glass substrate".

In addition, the Applicants note that Hafner discloses laser housings 13 and 14 to cut a glass substrate along a rail 12, and that Boddicker discloses a laser mechanism 9 suspended on a traverse arm 11 to cut a glass sheet.

Hafer and Boddicker both teach using laser devices to cut a glass substrate or sheet.

Applicants respectfully submit that since each of Choo, Hafer and Boddicker teaches using laser devices to cut glass substrate or sheet, no combination of these references would have led a skilled person a method such as recited in claim 1 as amended, and in particular comprising "melting a predetermined portion of the glass substrate by the second laser device emitting laser light with long wavelength from a second angle without cutting the glass substrate".

Besides, the Applicants respectfully note that since each of Choo, Hafer and Boddicker teaches using laser devices to cut glass substrate or sheet, modifying the teaching of any of these references so as to not cut the substrate or sheet would render the reference inoperative for its

intended purpose (of cutting the substrate or sheet), and can thus not be argued to be an obvious modification.

At least in view of the above, the Applicants respectfully submit that claim 1 as amended is patentable over Choo, Hafer and Boddicker.

#### Claim 6

The Applicants respectfully submit that the arguments used above to show that claim 1 as amended is patentable over Choo, Hafer and Boddicker can also be used to show that no combination of these references would have led a skilled person to a method as recited in claim 6, and in particular comprising "melting an edge of the glass substrate without cutting the glass substrate via the laser beam". Accordingly, the Applicants respectfully submit that claim 6 is patentable over Choo, Hafer and Boddicker.

#### Claims 2-5 and 6-19

Claims 2-5 depend on claim 1 and claims 7-19 depend on new claim 6. The Applicants respectfully submit that at least in view of their dependency on claims 1 or 6, claims 2-5 and 7-19 are patentable over Choo, Hafer and Boddicker.

#### Claim 20

New Claim 20 is patterned after Claim 1, but is of slightly different scope. Since new claim 20 also recites "melting a predetermined portion of the glass substrate by the second laser device emitting laser light ... from a second angle without cutting the glass substrate" it is believed that new claim 20 is patentable over the cited art.

\* \* \*

In view of the above, the Applicant submits that the application is now in condition for allowance and respectfully urges the Examiner to pass this case to issue.

The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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Respectfully submitted,



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